IN THE CLAIMS:

Please cancel claims 10, 25 and 26, amend claims 9 and 30, and add claims 35 and 36 as set out below.

9. (Twice Amended) A system for processing biological cells maintained in a sterile environment, comprising:

a supply module constructed and arranged to provide selected amounts of process chemicals;

a cell module including a cell sensor constructed and arranged to measure an amount of said biological cells supplied for processing;

a processing module constructed and arranged to process said biological cells;

a set of conduits for connecting said supply module, said cell module and said processing module in a sterile manner;

several valves constructed and arranged to control transfer of said biological cells and said process chemicals between said modules;

several sensors constructed and arranged to detect said biological cells and said process chemicals, wherein said several sensors include a weight sensor constructed and arranged to weigh said supplied amount of said biological cells; and

a control module operatively connected to said valves, said sensors and said processing module, said control module being constructed and arranged to receive data from said cell sensor and control said transfer and said processing of said biological cells based on said cell sensor data;

wherein said modules are constructed and arranged to prevent unwanted contamination of said cells during said processing.

10. (Cancel).

11. (Previously amended) The system of claim 9 wherein said cell sensor includes a volume sensor constructed and arranged to measure volume of said supplied amount of said biological cells.

12. (Previously amended) The system of claim 9 wherein said control module is further arranged to calculate amounts of said process chemicals based on said cell sensor data.

13. (Previously amended) The system of claim 9 wherein said control module is further arranged to select an algorithm for said processing based on said cell sensor data.

14. (Previously amended) The system of claim 9 wherein said supply module includes several containers constructed and arranged to hold said process chemicals at least some of them being in a liquid state.

15. (Previously amended) The system of claim 9 wherein said process chemicals include an enzyme solution.

16. (Previously amended) The system of claim 9 wherein said process chemicals include a saline solution.

17. (Previously amended) The system of claim 9 wherein said processing module includes a processing vessel constructed and arranged to vary its volume relative to a volume of said process chemicals and said cells transferred to said vessel for processing.

18. (Previously amended) The system of claim 9 wherein said processing module

includes a centrifuge.

19. (Previously amended) The system of claim 18 wherein said centrifuge is constructed and arranged to vary its volume by receiving a filling fluid arranged to occupy a selected volume.

20. (Previously amended) The system of claim 19 wherein said filling fluid is an expressor fluid designed to selectively express said process chemicals or said cells during centrifugation.

21. (Previously amended) The system of claim 9 wherein said processing module is constructed to agitate heat, cool or mix said processing chemicals and said cells.

22. (Previously amended) The system of claim 9 wherein said sensors include an optical sensor.

23. (Previously amended) The system of claim 9 wherein said sensors include a pressure sensor.

24. (Previously amended) The system of claim 9 wherein said sensors include a mass flow meter.

25. (Cancel)

26. (Cancel)

27. (Previously amended) The system of claim 9 further including a pump constructed and arranged to advance said material from said supply module to said processing module in said conduits.

28. (Previously amended) The system of claim 9 wherein said supply module further

includes at least one supply sensor constructed and arranged to measure the amount of at least one of said process chemicals transferred to said processing module.

29. (Previously amended) The system of claim 28 wherein said supply sensor includes a mass sensor.

30. (Twice Amended) A method of operating a cell processing system comprising a control module, a processing module connected in a sterile manner by a set of conduits to a cell module and to a supply module that provides selected process chemicals, and several sensors providing process data to said control module, said method including:

providing in said cell module biological cells;

measuring an amount of said cells supplied to said processing module for processing, wherein said measured amount of said cells supplied for processing is less than the amount of said biological cells provided in said cell module;

providing in said supply module process chemicals according to a processing algorithm;

dispensing from said supply module said process chemicals to said processing module based on said measured ~~measure~~ amount of said cells;

processing said cells in said processing module; and

storing said processed cell, whereby preventing unwanted contamination of said cells during said dispensing and said processing.

31. (original) The method according to claim 30, wherein said dispensing from said supply module includes calculating amounts of said process chemicals based on said measured amount of said cells.

32. (cancel).

33. (previously canceled).

34. (previously canceled).

35. (New) A method of operating a cell processing system comprising a control module, a processing module connected in a sterile manner by a set of conduits to a cell module and to a supply module that provides selected process chemicals, and several sensors providing process data to said control module, said method including:

providing in said cell module biological cells;

measuring an amount of said cells supplied to said processing module for processing via at least a weight sensor among several sensors, said several sensors constructed and arranged to detect said biological cells and said process chemicals;

providing in said supply module process chemicals according to a processing algorithm;

dispensing from said supply module said process chemicals to said processing module based on said measure amount of said cells;

processing said cells in said processing module; and

storing said processed cell, whereby preventing unwanted contamination of said cells during said dispensing and said processing.

36. (New) A system for processing biological cells maintained in a sterile environment, comprising:

a supply module constructed and arranged to provide selected amounts of process chemicals;

a cell module including a cell sensor constructed and arranged to measure an amount of said biological cells supplied for processing;

a processing module constructed and arranged to process said biological cells;

a set of conduits for connecting said supply module, said cell module and said processing module in a sterile manner;

several valves constructed and arranged to control transfer of said biological cells and said process chemicals between said modules;

several sensors constructed and arranged to detect said biological cells and said process chemicals, wherein said several sensors include a temperature sensor which includes a infrared sensor constructed and arranged to measure a temperature of said cells and said process chemicals inside said processing module; and

a control module operatively connected to said valves, said sensors and said processing module, said control module being constructed and arranged to receive data from said cell sensor and control said transfer and said processing of said biological cells based on said cell sensor data;

wherein said modules are constructed and arranged to prevent unwanted contamination of said cells during said processing.